

CLAIMS

What is claimed is:

1. A method of processing image data for display, the method comprising:
generating, from one or more glyphs, a set of alpha values representing the one or more glyphs; and
filtering the set of alpha values to generate a set of filtered pixel sub-component alpha values including at least one filtered alpha value for each pixel sub-component used to represent the one or more glyphs.
2. The method of claim 1, further comprising receiving the one or more glyphs, each glyph including a plurality of alpha values;
3. The method of claim 2, wherein the glyphs are character glyphs, the method further comprising the steps of:
sampling a character source image to generate the alpha values included in each character glyph, each distinct character glyph being generated from a different character source image;
storing each character glyph including the generated alpha values in a glyph cache; and
outputting from the glyph cache said one or more glyphs.

4. The method of claim 3, wherein each character source image includes a plurality of source image pixel segments which have an area corresponding proportionately in size to the area of a pixel of a display device used to display the one or more character glyphs, said sampling including the act of sampling each source image pixel segment at a rate which is an integer multiple of the number of pixel sub-components included in each pixel of said display device.

5. The method of claim 3, further comprising:

performing a color blending operation using said filtered pixel sub-component alpha values as blend coefficients, using foreground color luminous intensity values, and using background color luminous intensity values, to generate red, green and blue pixel sub-component luminous intensity values.

6. The method of claim 5, further comprising:

performing a gamma correction operation on the red, green and blue pixel sub-component luminous intensity values generated by the color blending operation to produce gamma corrected red, green and blue pixel sub-component luminous intensity values; and

storing the gamma corrected red, green and blue pixel sub-component luminous intensity values in a display buffer.

7. A computer program product comprising one or more computer readable media carrying computer executable instructions that implement a method of processing image data for display, the method comprising:

generating, from the received one or more glyphs, a set of alpha values representing the one or more glyphs; and

filtering the set of alpha values to generate a set of filtered pixel sub-component alpha values including at least one filtered alpha value for each pixel sub-component used to represent the one or more glyphs.

8. The computer program product of claim 7, the method further comprising receiving the one or more glyphs, each glyph including a plurality of alpha values;

9. The computer program product of claim 7, wherein the one or more glyphs comprise a plurality of glyphs, and wherein at least one filtered pixel sub-component alpha value is generated from alpha values included in the set of alpha values corresponding to two different character glyphs.

10. The computer program product of claim 9, wherein the set of alpha values represent a string of glyphs and includes (i) alpha values from a first glyph corresponding to a first pixel located along a first side of a glyph boundary, and (ii) alpha values from a second glyph corresponding to a second pixel located along a second side of the glyph boundary, and wherein the at least one filtered pixel sub-component generated from alpha values corresponding to two different character glyphs is generated by filtering an alpha value from the first pixel and an alpha value from the second pixel.

11. A system for processing image data, the system comprising:

means for generating a set of alpha values from one or more glyphs, each glyph including a plurality of alpha values; and

means for filtering the set of alpha values to generate a set of filtered pixel sub-component alpha values including at least one filtered alpha value for each pixel sub-component used to represent the one or more glyphs.
12. The system of claim 11, further comprising:

a glyph cache for storing said one or more glyphs, each glyph including a number of alpha values, the number of alpha values included in each glyph being greater than the number of pixels used to display the glyph, an output of the glyph cache being coupled to the means for generating a set of alpha values from the one or more glyphs.
13. The system of claim 12, further comprising:

means for performing a color blending operation using the filtered pixel sub-component alpha values, foreground color information and background color information to generate pixel sub-component luminous intensity values.
14. The system of claim 13, further comprising:

means for performing a gamma correction operation on the generated pixel sub-component luminous intensity values to generate gamma corrected pixel sub-component luminous intensity values.

15. A method of processing image data, comprising:

sampling an image to generate a plurality of alpha values; and

filtering the alpha values to generate multiple filtered alpha values per pixel.
16. The method of claim 15, further comprising storing the filtered alpha values in a glyph cache as part of a character glyph.
17. The method of claim 16, wherein the step of storing the alpha values in the glyph cache includes the step of:

compressing the multiple filtered alpha values generated for each pixel into a single compressed value; and

storing the single compressed value generated for each pixel in the glyph cache.
18. The method of claim 16, further comprising:

receiving at least two character glyphs from the glyph cache; and

combining the character glyphs to form multi-glyph images, the step of combining the character glyphs including the step of:

processing multiple filtered alpha values corresponding to the same pixel sub-component of the multi-glyph image, to generate one filtered alpha value per pixel sub-component of the multi-glyph image, said multiple filtered alpha values corresponding to the same pixel sub-component resulting from overlapping glyph edges.

19. The method of claim 15, wherein a pixel includes a red, a green and a blue pixel sub-component, and wherein the filtering produces a red, a green and a blue filtered pixel sub- component alpha value for each alpha value used to represent said image.

20. The method of claim of claim 15, wherein the filtering step includes:
generating each filtered alpha value, from multiple alpha values generated by said sampling, one filtered alpha value being generated for each pixel sub-component of a pixel.

21. A computer program product comprising one or more computer readable media carrying computer executable instructions that implement a method of processing image data, the method comprising:

sampling an image to generate a plurality of alpha values; and
filtering the alpha values to generate multiple filtered alpha values per pixel

22. The computer program product of claim 21, the method further comprising a step of:

storing the filtered alpha values in a glyph cache as part of a character glyph.

23. The method of claim 22, wherein the step of storing the alpha values in the glyph cache includes the step of:

compressing the multiple filtered alpha values generated for each pixel into a single compressed value; and
storing the single compressed value generated for each pixel in the glyph cache.

24. The method of claim 22, further comprising:
- receiving at least two character glyphs from the glyph cache; and
- combining the character glyphs to form multi-glyph images, the step of combining the character glyphs including the step of:
- processing multiple filtered alpha values corresponding to the same pixel sub-component of the multi-glyph image, to generate one filtered alpha value per pixel sub-component of the multi-glyph image, said multiple filtered alpha values corresponding to the same pixel sub-component resulting from overlapping glyph edges.